Installation and operating instructions

Digital gear indicator SUZUKI

versions:
- **RL, BL**
- **LED red, LED blue**

for SUZUKI:
- **GSXR 600** since year of manufacture 2001
- **GSXR 750** since y.o.m. 2000
- **GSXR 1000** since y.o.m. 2001
- **GSXR 1300** Hayabusa
- **GSX 1400** since y.o.m. 2001
- **GSR 600** since y.o.m. 2006
- **GSF 650 Bandit** since y.o.m. 2007
- **GSF 1250 Bandit** since y.o.m. 2007
- **SV 650** since y.o.m. 2003
- **SV 1000** since y.o.m. 2003
- **V-Strom** since y.o.m. 2002
- **TL 1000R / S** since y.o.m. 1998
- see actual list on www.tne-systeme.de

Dear customer,
thank you for your purchase.
Please read the following instructions carefully, so you wouldn't have any difficulties to install the gear indicator. We wish you lots of success installing the indicator and much pleasure using it.

The gear indicator has no approval to be used on public roads.

Warranty
We guarantee the function of the gear indicator two years beginning on the day of purchase. Damages as a result of improper installation make an exception of the guarantee.

Please tell us if you have any questions, suggestions for improvement or experiences:

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Installing the gear indicator

Safety and installation instructions

Please work carefully. Do not pull the cable or cable connections.
Improper cable connections may result in cable fires.
Improper cable installations or cable connections may result in malfunction or damages to the gear indicator.
Correct laying and connection of cables is essential for long-term, error-free function of the gear indicator.

The connector plugs at the gear indicator‘s cable have adjustments, please notice that and plug in the connector very carefully to avoid damage of pins.

- Install the cables along the original cable looms and connect them as frequently as possible with insulating tapes or cable binders
- Use only the inserted connectors for connecting the cables
- We recommend to disconnect the battery before installing the cables
- **To avoid interference from the ignition system do not put the cables of the gear indicator near any parts of the ignition system**
- Please install the plug-in connectors at a suitable place where no splash water can reach them and keep care that they can not detach from their place (use tape or cable binders).
- Do not locate the cables near sharp edges or hot or moving parts of the motorbike.
- Please ask an expert if you have problems with the installation

Earthing cable connection

- Screw the cable with the ear on an earthing srew at the motorbike, do not connect to a cable.

We are not responsible for consequential damages by installing and using the gear indicator.

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Installation

(see also pictures on page 9ff)

1. Place the gear indicator with the adhesive tape at an adequate place. The connection cable exits at the bottom. (►ill. 1)

2. Find the gear sensor, maybe you have to remove some covers. The gear sensor is near the place where the gearshift goes into the gearbox (at SV 1000 and Hayabusa at the right side from the motorbike above the brake lever)
   The gear indicator has a beige cover and there are three **cables (blue, pink, black)** connected in. (►ill. 2)

3. Follow this cable to the connector (near the tank or the bench) (►ill. 3)

4. Connect the **yellow cable of the gear sensor** to the pink cable with the inserted red clamp; put the gear sensor cable together with the pink cable into the clamp and press it with a gripper.
   DO NOT SHORTEN OR CUT THE GEAR SENSOR CABLE!
   Please note the right connection on page 11, especially if you use a g-pack.)

5. **Earth cable (black):** Attach the cable with the ear to an earthing screw on the motorbike or screw it onto the metalwork of the motorbike, do not connect it to moving parts or with other cables. Always ensure a good earthing connection. (►ill. 4)

6. **Plus cable (red):** Clamp this cable with the inserted blue clamp to a +12V cable (for example: ignition or light). You can use the cable to the light or the green plug of the ignition switch. (►ill. 5)

7. Program the gear indicator (see next page)

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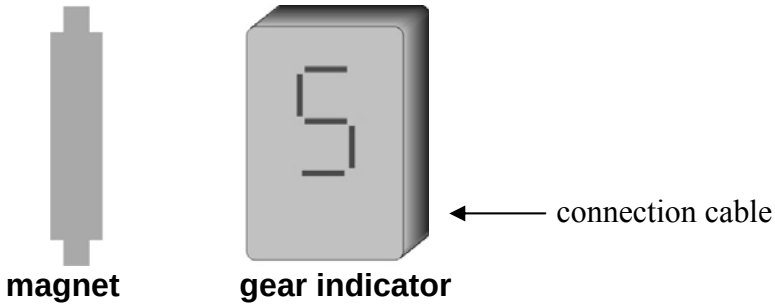
Programming the gear indicator

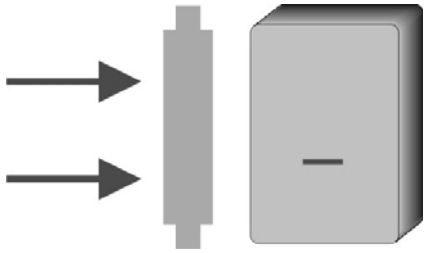
You have to program the gear indicator so that it displays the gears correctly. For the most motorbikes you can use one of both maps that are preassigned. These two maps are suitable for most SUZUKI-motorbikes. If you use a g-pack or the gears will not be displayed correctly, you have to break in the gear indicator individually.

General

So that the programming of the gear indicator is simple as it can be, you can do it with the inserted magnet. Inside the gear indicator there is a control element witch reacts to a magnet.



When you approach the magnet parallel to the left side of the gear-indicator in a distance of less than 8 mm (sideways or from top) you actuate the magnetic contact. The gear indicator displays „_“, that confirms the input, then take the magnet away and you can do the next step for the programming.



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Information:
If you do not actuate the control element during 30 sec., the gear indicator displays **E** (error) and the existing adjustment will be used.

Preparation

- The gear indicator is connected to the ignition:
  1. turn off the ignition (gear indicator is out)
  2. **engage the 1st gear and put the sidehead down.**

- Alternative: If the gear indicator is not connected to the ignition
  1. turn off the ignition (gear indicator is out)
  2. **engage the 1st gear and put the sidehead down**

Programming

1.1 Approach the magnet parallel to the left side of the gear indicator

1.2 Turn on the ignition (alternative: turn on the gear indicator, if it is not connected to the ignition)

1.3 The display shows „_“, then take the magnet away

1.4 **L** (learning) flashes for 10 sec.

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Accepting the preassigned maps

Map 1: SUZUKI- models 1 (preset)
Map 2: SUZUKI- models 2 (older models)

Please do the programming like it is written till point 1.4

1.5 when **L** (learning) flashes, put the magnet near the gear indicator

1.6 now **1** flashes for 10 sec

1.7 if you want to use map 1, actuate the magnetic contact, if you want to use map 2, wait till **2** is flashing and then actuate the magnetic contact

1.8 The display turns off and „≡“ is flashing, that means that the data is stored. If the sidehead is put up the gear indicator displays the actual gear.

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Individually programming of gears

Please note:

- Jack up the motorbike with a separate stand or sit on the motorbike because the sidehead has to be put up
- Keep care that the gears lock in place, maybe you have to turn the backwheel

If you would **not** accept the programmed maps:

Please do the steps 1.1 till 1.4
(The 1st gear has to be engaged and the sidehead has to be put down)

1.5 wait till **C** is flashing

1.6 actuate the magnetic contact

1.7 now **1** is flashing, put the sidehead up (1st gear is still engaged)

1.8 actuate the magnetic contact

1.9 now **2** is flashing, please change into the 2nd gear then actuate the magnetic contact

1.10 go on until you change into the 6th gear

1.11 When you changed into the 6th gear, actuate the magnetic contact again. The display turns off and „≡“ is flashing, that means that the data is stored. If the sidehead is put up the gear indicator displays the actual gear.

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Turn on and off the brightness control

In the gear indicator there is an automatic brightness control. You can deactivate it then the brightness is only 85 %.

Do the programming as described from point 1.1 till point 1.4.

1.5 if **L** (learning) is flashing, actuate the magnetic contact

1.6 now **1** is flashing 10 sec., please wait

1.7 now **2** is flashing 10 sec., please wait

1.8 now **H** is flashing 10 sec., in this time actuate the magnetic contact

1.9 The automatic brightness control is now changed, that means when it was active it is now inactive or reverse

1.10 The display turns off and „≡“ is flashing, that means that the data is stored. If the sidehead is put up the gear indicator displays the actual gear.

Please note:

- If you want to accept programmed maps after you changed the automatic brightness control, the automatic brightness control is again active (default).

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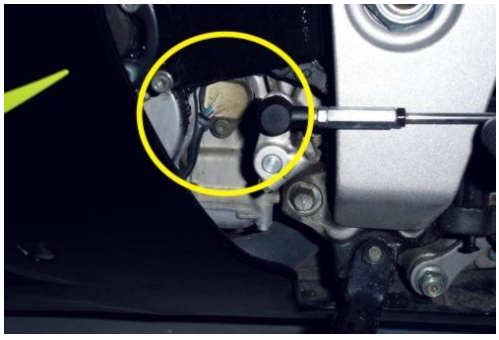
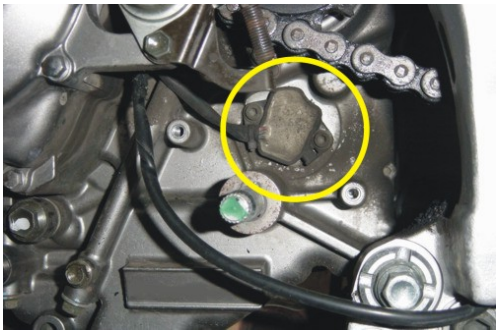
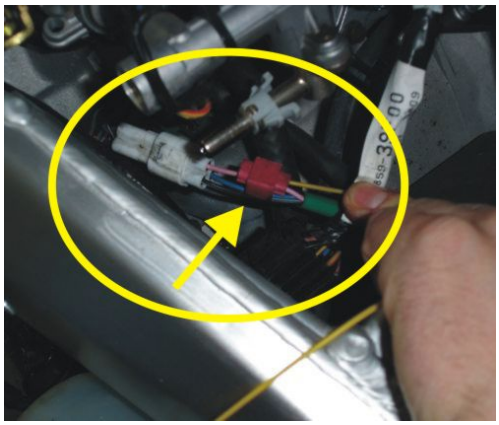
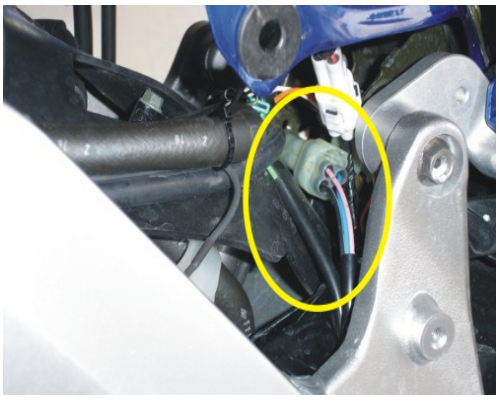
Illustrations

	Installation GSXR-600 (yom 2001)	**Installation SV 650** (yom 2004)
ill. 1 gear indicator attached to the cockpit		
ill. 2 gear sensor		
ill. 3 connector of gear sensor (near bench or tank), clamp gear indicator to the pink cable		

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ill. 4

possible connection of the earthcable (red circle),

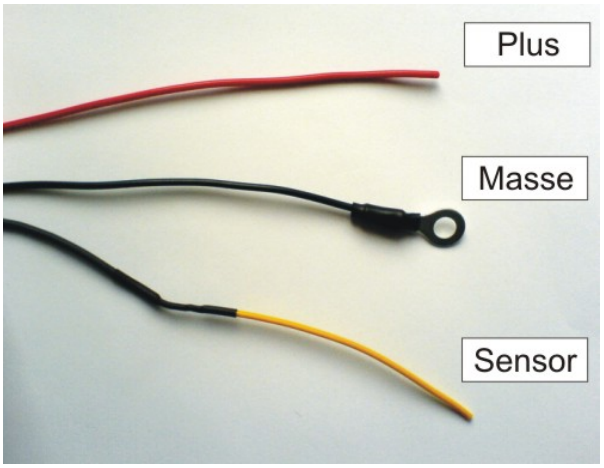
connector of gear sensor (yellow circle)

ill. 5

possible connect for plus cable

ill. 6

cables of gear indicator



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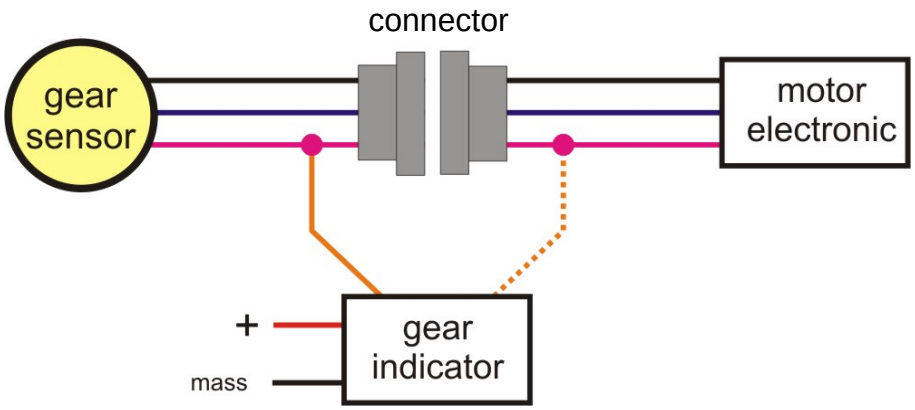
Connecting to the gear sensor

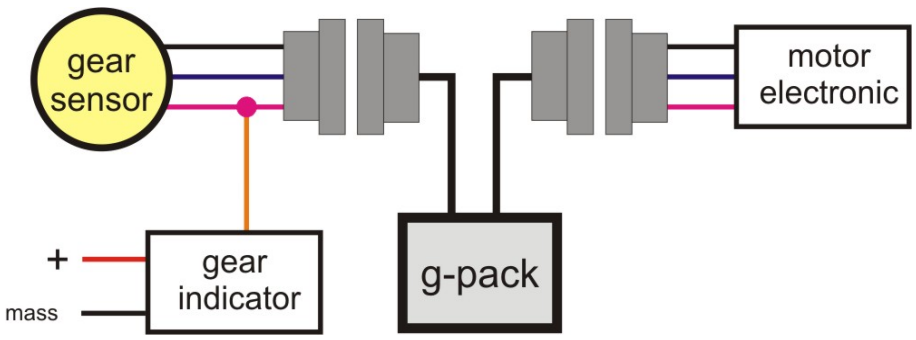
Connection without g-pack

Connect to the pink cable between gear sensor and connector.
Avoid connecting between the connector and the motor electronic (dashed).
Programmed maps can be used.



Connection with g-pack

Precondition: The g-pack consists of a resistor between the gear sensor and the motor electronic.
If there is a resistor inside the g-pack which is connected **instead** of the gear indicator, you need an adapter plug. Please contact us. Further information is available on our homepage.
Connect the gear indicator to the pink cable between the gear sensor and the connector.
Programmed maps can not be used.
The gear indicator has to be programmed individually. (►page 7)



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Troubleshooting

problem: After individual programming and sidehead put up the gear indicator displays C instead of 1

solution: When programming individually the sidehead has to be put down and the first gear must be engaged

problem: The gear indicator displays C all the time, the display of the motorbike shows the error "FI"

solution: The shielded gear sensor cable of the gear indicator has a short circuit. Maybe you have crimped the cable or damaged it in any way. Please order a new cable set.

problem: The gear indicator displays C all the time, if the motorbike is moved the gear indicator shows random gears.

solution: The pink cable of the gear indicator is connected to a wrong cable. Make sure that the pink cable is connected to the white plug with the three cables (pink, blue, black).

problem: When using a g-pack the gear indicator displays C all the time

solution: You need an adapter plug that makes the gear indicator working. Please contact us.

problem: The gears are displayed unreliably. For example when the 5th gear is engaged the gear indicator sometimes shows the 6th gear, etc.

solution: Some SUZUKI motorbikes emit much electromagnetic radiation that influences the gear indicator.
=> Program the gear indicator specially as described on the following pages.

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Appendix

Specially breaking in the gears

If the gear indicator does not indicate the gears reliably and steady, neither with the preassigned maps nor after the individual breaking, you can activate a special breaking-program.

Please note:

- Jack up the motorbike with a separate stand or sit on the motorbike because the sidehead has to be put up
- Keep care that the gears lock in place, maybe you have to turn the backwheel
- Do not turn on the motor
- **Note:** you may have a better programming result when the motor is warm

1.0 Engage neutral (gear), put down the sidehead, turn off ignition

1.1 Approach the magnet parallel to the left side of the gear indicator

1.2 Turn on the ignition (alternative: turn on the gear indicator, if it is not connected to the ignition)

1.3 The display shows „_“, then take the magnet away

1.4 **L** (learning) flashes for 10 sec., in this period actuate the magnetic contact

1.5 one after one **1** , **2** , **H** , ° are flashing for 10 sec., wait

1.6 **n** flashes for 10 sec., in this period actuate the magnetic contact

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1.7 now **C** is flashing. Engage the 1st gear and put down the sidehead (if not done yet)

1.8 actuate the magnetic contact

1.9 now **1** is flashing, put the sidehead up (1st gear is still engaged)

1.10 actuate the magnetic contact

1.11 now **2** is flashing, please change into the 2nd gear then actuate the magnetic contact

1.12 go on until you change into the 6th gear

1.13 When you changed into the 6th gear, actuate the magnetic contact again. The display turns off and „≡“ is flashing, that means that the data is stored. If the sidehead is put up the gear indicator displays the actual gear.

Technical data

Dimensions:	40x28x18mm (h x w x d) versions RL, BL
	30x20x11mm (h x w x d) version LED
display size:	20mm all versions
operating voltage:	9..15V protection against reverse polarity
current consumption:	20mA versions RL, LED
	40mA version BL

CE

protected against splash water, no loading of gear sensor signal

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